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EXAMINER				
REESE, DAVID C				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/827,499

Applicant(s)

FRIEDERICH ET AL.

Examiner

DAVID C. REESE

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 8,9 and 13-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 8-9, 13-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

THIS FINAL ACTION IS RESPONSIVE TO THE AMENDMENT FILED 2/11/2008. THE
SUSPENSION PERIOD OF 6 MONTHS HAS PASSED. SEE MPEP 709.

- Claims 1-7, 10-12 were canceled.
- Claims 8, 13, 15-18 were amended.
- Claims 8-9, 13-18 are pending.

Claim Objections

[1] Claim(s) were previously objected to because of informalities. Applicant has successfully addressed these issues/failed to successfully address these issues in the amendment filed on 2/11/2008. Accordingly, the objection(s) to the claim(s) have been withdrawn.

However as amended:

Claims 8, 15-16 and 18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The subject matter of the instant claims is already incorporated into that of depending independent claim 14.

Claim Rejections - 35 USC § 103

[2] The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

[3] Claims 9, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0989311 in view of Miki et al., US-3,992,974, in further view of Wagner, US-4,193,434, and in even further view of Hsiao, US 6,302,629.

As for Claim 14, EP 0989311 in view of above teaches of a screw element having a screw axis, comprising

a tool engagement element (page 5 on the applicant's instant amendment);

a spring element having a free edge (7');

said spring element being extending from and being integral with the screw element to form one piece;

and is coaxial with the screw axis and mounted on the periphery of the screw element and projects radially from said periphery;

said free edge defining a workpiece contact plane which is substantially perpendicular to the screw axis and is spaced axially from the screw element;

wherein the spring element contacts a workpiece in a region outside the periphery of the screw element and is generally concentric with the screw axis;

wherein the spring element is a ring which is generally concentric around the screw axis;

wherein the spring element is [adapted to prevent the pre-stressing effect for the screw connection being lost by virtue of changes in length thus ensuring sufficient frictional force to prevent the screw connection becoming unscrewed], and

With regard to that in brackets [] above: Note that it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation, but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

The difference between the claim and EP 0989311 is the claim recites: wherein the spring element is of a lower hardness than the screw element; wherein the ring has a plurality of openings distributed uniformly over its periphery; and wherein the spring element has projections in the region of the workpiece contact.

With respect to the first issue above, a person of ordinary skill in the art, upon reading the reference, would also have recognized the desirability of improved methods of formulating the spring element. Miki et al., teaches of a conical spring washer for a bolt. Furthermore, Miki et al., teaches of altering certain characteristics of said washer (see the various tables and graphs) including that of the hardness to create an optimum relationship of force distribution with regard to the bolt and/or fastening structures. Miki et al., also inherently discloses to one of ordinary skill in the art that "...the washer of the present invention is used in the plastic range of it, so if the hardness of the washer is too high, the washer would be in danger of hydrogen embrittlement...therefore, it is desirable that the hardness is under..." as stated in col. 7, lines 14-27. Thus, it would have been obvious to a person of ordinary skill in the art to try lowering the hardness of the spring element of EP 0989311 in an attempt to provide an improved formulation of the spring element and assembly, as a person with ordinary skill has good reason to pursue the known options within his or her technical grasp. In turn, because the spring element as claimed has the properties predicted by the prior art, it would have been obvious to make the spring element of EP 0989311 of a lower hardness than that of the screw element.

With respect to the second issue above, Wagner discloses a fastener similar to that of EP 0989311 in view of Miki et al., including that of a spring element 28 (Fig. 2 of Wagner). Wagner further teaches of additional embodiments that the structure of the spring element 28 can

take, specifically including a modification of Fig. 5; showing a spring element with a plurality of openings distributed uniformly over its periphery. As stated profoundly in columns 3 and 4, beginning with line 50 in col. 3, it is stated that, "The spring constant of the flange 28 may be varied to suit the particular application...various modifications may be made to the spring-like flange 28 in order to reduce the spring constant for any given application...it should be noted that a plurality of closed apertures 48 are created in the flange is circumferentially spaced locations radially outwardly of inner peripheral surface 52, thus effectively forming a plurality of interconnected spring arm regions 50 and outer peripheral load bearing regions 54". It would have been obvious to one of ordinary skill in the art, having the disclosures of EP 0989311 in view of Miki et al. and Wagner before him at the time the invention was made, to modify the spring element of EP 0989311 in view of Miki et al. to incorporate various modifications to said spring element, as in Wagner. One would have been motivated to make such a combination to help effectively eliminate the compressive load on a plastic workpiece, helping to reduce the spring load on the plastic while maximizing the total clamping load capacity of the column or load, as taught by Wagner.

With respect to the third issue above, that is, of the spring element having projections in the region of the workpiece contact; Hsiao discloses a fastener similar to that of EP 0989311 in view of Miki et al.. In addition, Hsiao further teaches of projections in the region of the workpiece contact. It would have been obvious to one of ordinary skill in the art, having the disclosures of EP 0989311 in view of Miki et al. and Hsiao before him at the time the invention was made, to modify the spring element of EP 0989311 in view of Miki et al. to include projections, as in Hsiao. One would have been motivated to make such a combination because

the projections can generate counter stresses, which can absorb any ways of torque and won't loose (abstract), as taught by Hsiao.

Re: Claim 9, EP 0989311 shows wherein the screw is of a thread-forming nature (19).

Re: Claim 17, EP 0989311 shows wherein the spring element has a workpiece contact which is annular throughout.

Response to Arguments

[4] Applicant's arguments filed 2/11/2008 regarding rejections under 35 U.S.C. 103 have been fully considered but they are not persuasive. To begin, the applicant addresses the Miki reference. It is stated by applicant that since the Miki reference addresses a conical washer for a high tensile strength bolt and not relating to a screw for use in contact with soft counter-faces, it is not applicable. The examiner disagrees. First, not only is the screw being for use with soft counter-faces not claimed, the applicant misinterprets that only the prior art of Miki was used when the rejection is based on a combination of references. In response to Applicant's piecemeal analysis of the references, it has been held that one cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references. *In re Keller*, 208 USPQ 871 (CCPA 1981). Rather, the prior art of Miki was used in conjunction with others; more specifically being used by the examiner showing the prevalence in the art to try lowering the hardness of the spring element in an attempt to provide an improved formulation of the spring element and assembly. Ultimately, it is not required that the prior art disclose or suggest the properties newly-discovered by an applicant in order for there to be a prima facie case of obviousness. See *In re Dillon*, 919 F.2d 688, 16 USPQ2d 1897, 1905 (Fed. Cir. 1990). Moreover, as long as some motivation or suggestion to combine the references is

provided by the prior art taken as a whole, the law does not require that the references be combined for the reasons contemplated by the inventor. *See In re Beattie*, 974 F.2d 1309, 24 USPQ2d 1040 (Fed. Cir. 1992); *In re Kronig*, 539 F.2d 1300, 190 USPQ 425 (CCPA 1976) and *In re Wilder*, 429 F.2d 447, 166 USPQ 545 (CCPA 1970).

Furthermore, in opposition to applicant's arguments that Miki discloses a single washer which is not integral with a screw, the applicant is reminded that it has been held that the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. *In re Bozek*, 163 USPQ 545 (CCPA 1969). Lastly, with regard to the claimed anti-loosening effect, as articulated above in the claim rejection, note that it has been held that the recitation that an element is "adapted to" perform a function is not a positive limitation, but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchison*, 69 USPQ 138.

Next, moving then to applicant's remarks concerning the prior art of Wagner, it is stated by applicant that one would never combine openings as disclosed in the Wagner-reference with that of Miki. The examiner disagrees. First, the examiner would like to point out that the above rejection was not solely based on Miki in view of Wagner, but rather, EP in view of Miki, in further view of Wagner and in even further view of Hsiao. Furthermore, as similarly articulated above, the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. *In re Bozek*, 163 USPQ 545 (CCPA 1969). And in the instant case, the prior art of Wagner was used

in conjunction with the other references to show the prevalence in the art of a washer having a plurality of openings helping to effectively eliminate the compressive load on a plastic workpiece, helping to reduce the spring load on the plastic while maximizing the total clamping load capacity of the column or load.

Next, moving then to applicant's remarks concerning the prior art of Hsiao, it appears that the applicant argues similarly to that above, and in response, the test for obviousness is not whether the features of one reference may be bodily incorporated into the other to produce the claimed subject matter but simply what the combination of references makes obvious to one of ordinary skill in the pertinent art. *In re Bozek*, 163 USPQ 545 (CCPA 1969). With the examiner maintaining that one of ordinary skill in the art would appreciate the teachings provided by Hsiao showing the prevalence in the art of a spring element having projections in the region of workpiece contact. In this case, the prior art of EP 0989311, Wagner, Miki, and Hsiao all within the field of the inventor's endeavor, each reference reasonably pertinent to the particular problem with which the inventor was involved. *In re Wood*, 202 USPQ 171, 174.

Lastly, applicant makes a general statement stating that the various rejections based upon the prior art of EP 0989311, Miki, Wagner and Hsiao is based on a piecemeal extraction of elements which have been piece together in an arbitrary puzzle like combination with hindsight construct. The examiner disagrees. In response to Applicant's argument that the Examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level or ordinary skill at the time the claimed invention was made, and does not include knowledge

gleaned only from the applicant's disclosure, such a reconstruction is proper. In *re* McLaughlin, 443, F.2d 1392; 170 USPQ 209 (CCPA 1971). Granting patent protection to advances that would occur in the ordinary course without real innovation retards progress and may, for patents combining previously known elements, deprive prior inventions of their value or utility. ...It is common sense that familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.

In addition, the determining of obviousness does not require staying within the object of EP 0989311. "The question is not whether the combination was obvious to the patentee but whether the combination was obvious to a person with ordinary skill in the art." *KSR Int'l. Co. v. Teleflex Inc.*, 127 S.Ct. 1727, 1742, 82 USPQ2d 1385, 1397 (2007). Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed. In making the obviousness determination one "can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *KSR*, 127 S.Ct. at 1741, 82 USPQ2d at 1396. "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *KSR*, 127 S.Ct. at 1742. 82 USPO2d at 1397.

Lastly, with regard to applicant's assertion that the combination utterly fails the teach, motivation, or suggestion test, though the examiner disagrees with this assertion, he would like to point out that *KSR* forecloses the argument that a specific teaching, suggestion, or motivation is required to support a finding of obviousness. *Ex parte Smith*, --USPQ2d--, slip op. at 20, (Bd. Pat. App. & Interf. June 25, 2007).

Conclusion

[5] THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

[6] Any inquiry concerning this communication or earlier communications from the examiner should be directed to David C. Reese whose telephone number is (571) 272-7082. The examiner can normally be reached on 7:30 am-6:00 pm Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor Batson can be reached at (571) 272-6987. The fax number for the organization where this application or proceeding is assigned is the following: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Reese

/D. C. R./
Examiner, Art Unit 3677

/Victor Batson/
Supervisory Patent Examiner, Art Unit 3677